46. (Amended) A method of identifying a compound that inhibits phosphorylation of a JNK3 substrate, the method comprising:

comparing the amount of a JNK3 substrate phosphorylated in the presence and absence of a compound;

selecting the compound if there is a decrease in the amount of JNK3 substrate phosphorylation in the presence of the compound compared to the phosphorylation in the absence of the compound; and

administering the selected compound to an animal model of an excitotoxic disorder to assess excitotoxicity,

wherein a decrease in excitotoxicity indicates that the selected compound inhibits the phosphorylation of a JNK3 substrate.

49. (Amended) A method of identifying a candidate compound for the treatment of a disorder related to excitotoxicity, the method comprising:

incubating a neuronal cell that can express a JNK3 protein with a compound under conditions sufficient to express the JNK3 protein;

incubating a control cell under the same conditions and for same time absent the compound; and

comparing the level of JNK3 activity in the presence and absence of the compound, wherein a difference in the level of JNK3 activity indicates that the compound is a candidate compound for the treatment of a disorder related to excitotoxicity.

50. (Amended) A method of identifying a candidate compound for the treatment of a disorder related to excitotoxicity, the method comprising:

incubating a JNK3 protein expressed and isolated from a neuronal cell with a JNK3 substrate and a compound under conditions sufficient to allow the interaction of the JNK3 protein with a JNK3 substrate;

incubating a JNK3 protein and the JNK3 substrate under the same conditions and for the same time absent the compound; and

comparing the level of JNK3 activity in the presence and absence of the compound, wherein a difference in the level of JNK3 activity indicates that the compound is a candidate compound for the treatment of a disorder related to excitotoxicity.

51. (Amended) A method of identifying a candidate compound for the treatment of a neuronal disorder, the method comprising:

incubating a JNK3 protein expressed and isolated from a neuronal cell with a JNK3 substrate and a compound under conditions sufficient to allow the interaction of the JNK3 protein with the JNK3 substrate;

incubating the JNK3 protein and the JNK3 substrate under the same conditions and for the same time absent the compound; and

comparing the level of JNK3 activity in the presence and absence of the compound, wherein a difference in the level of JNK3 activity indicates that the compound is a candidate compound for the treatment of a neuronal disorder.

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52. (Amended) A method of identifying a candidate compound for the treatment of a neuronal disorder, the method comprising:

incubating a neuronal cell capable of expressing a JNK3 protein with a compound under conditions sufficient to express the JNK3 protein;

incubating a control cell under the same conditions and for same time absent the compound; and

comparing the level of JNK3 activity in the presence and absence of the compound, wherein a difference in the level of JNK3 activity indicates that the compound is a candidate compound for the treatment of a neuronal disorder.--